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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/720,663	08/06/2001	William M. Ayers	901715-ETT	3905

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EXAMINER

MAYEKAR, KISHOR

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/720,663	Applicant(s) AYERS, WILLIAM M.	
	Examiner Kishor Mayekar	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-21 and 32-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-21 and 32-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: the typo error "including" in line 16 of page 10. Appropriate correction is required.
2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 16, 37, 39, 40 and 44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 16, the phrase "The system ... comprises a precursor material" is indefinite for claiming the precursor material as part of the structure of the system.

In claim 37, the same is applied to claim 16.

In claim 39, the same is applied to claim 16.

In claim 40, the same is applied to claim 16 for claiming a liquid as part of the structure of the system.

In claim 44, the same is applied to claim 16.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 11-21, 32-34 and 37-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mutterer, Jr. et al. (US 6,258,329 B1) in view of Moisan et al. (US 6,224,836 B1) and Warmbier et al. (US 5,540,886), all the references cited in the last Office action. Mutterer's invention is directed to a device for microwave assisted chemical processes. Mutterer discloses that the device comprises the

recited source of microwave 11, microwave transparent barrier 16, microwave reflecting enclosure 12, and feed back control 20 (Figs. 1 and 3; col. 3, line 57 through col. 4, line 56; and col. 4, line 64 through col. 5, line 15). Mutterer also discloses that the microwave transparent barrier 16 comprises fluid passageways 24, 25 and 26 to allow ambient gases to enter, draw hot vapors, and add liquid to the microwave transparent barrier 16 (col. 5, lines 22-39). As such, Mutterer suggests that the microwave transparent barrier 16 is vapor tight and the adding of liquid from a source to the microwave transparent barrier 16. The differences between Mutterer and the above claims are the provision of the recited solvent vapor removal device, gas concentration sensor, supply vessel and the intended use of the device for the generation of high purity gas.

As the first two differences, Moisan shows in a device for microwave assisted chemical processes the provision of the recited solvent vapor removal device 66 or 68 and a sampling cell 78 or 80 capable of analyzing the gas by Fourier transform infrared spectrometry (Fig. 6). Warmbier shows in a device for microwave assisted chemical processes the provision of gas concentration sensor in addition to pressure and temperature sensors to control the treatment process. The subject matter as a whole would have been obvious to one having ordinary skill

in the art at the time the invention was made to have modified Mutterer's teachings as shown by Moisan and Warmbrier because the motivation to make a specific structure is always related to the properties or uses one skilled in the art would expect the structure to have, *In re Newell* 13 USPQ 2d 1248; *Fromson v. Advance Offset Plate* 225 USPQ 26; *In re Gyurik* 201 USPQ 552.

As to third difference, the provision of the recited supply vessel, although Mutterer is silent in regards to the recited supply vessel, however, since Mutterer discloses the adding of liquid to the barrier 16 during the microwave assisted chemical processes, Mutterer suggests the adding of the liquid outside the reaction chamber from a source containing the liquid.

As to the latter, since Mutterer discloses the device for microwave assisted chemical processes and Moisan shows in col. 4, lines 15-23 the use of the device in a chemical purification, the selection of the use of the device in the treatment of chemical processes would have been within the level of ordinary skill in the art. Further, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the references' teachings because it has been held on the intended use of a device that "apparatus claims cover what a device is, not what a device does", *Hewlett-*

Packard Co. v. Bausch & Lomb Inc., 15 USPQ 2d 1525.

As to the subject matter of claims 16, 37, 39, 40 and 44, it has been held that "expressions relating apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim", *Ex parte Thibault*, 164 USPQ 666; *In re Young* 25 USPQ 69; *In re Otto* 136 USPQ 458.

As to the subject matter of claims 18-21, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the references' teachings because "the use of conventional materials to perform their known functions in a conventional process is obvious", *In re Raner* 134 USPQ 343.

As to the subject matter of claim 42, Mutterer's device is for minimizing the reflux problem in the reaction chamber (col. 2, lines 47-52).

7. Claims 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mutterer '329 as modified by Moisan '836 and Warmbier '886 as applied to claims 11-21, 32-34 and 37-44 above, and further in view of Ayers (US 5,158,656), another reference cited in the last Office action. The difference between the

references as applied above and the instant claims is the provision of a semiconductor device fluidly coupled to the manifold. Ayers shows the above limitation after the purification (see abstract and Fig. 1). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified references' teachings as shown by Ayers because the motivation to make a specific structure is always related to the properties or uses one skilled in the art would expect the structure to have, *In re Newell* 13 USPQ 2d 1248; *Fromson v. Advance Offset Plate* 225 USPQ 26; *In re Gyurik* 201 USPQ 552.

Response to Arguments

8. Applicant's arguments filed October 15, 2005 have been fully considered but they are not persuasive.

In response to Applicant's argument to the rejections of claims 16, 37, 39, 40 and 44 under the second paragraph of 35 USC 112, since the above claims are directed to a system (a device), the limitation that the system comprises a precursor material is not a structure of the system. However, the phrases "a supply vessel for containing a precursor material" as claimed in claim 11, "a reaction

chamber for receiving a precursor material" as claimed in claim 32, and "a supply vessel ... adapted to feed the precursor material" as claimed in claim 41 are sound because the claims recite the intended use of the supply vessel or the reaction chamber.

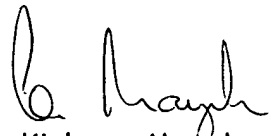
As to the argument to the rejection to claims under 35 USC 103, the argument is not persuasive in view of the new ground of rejections set forth in the above paragraph.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Kishor Mayekar', is positioned above the printed name.

Kishor Mayekar
Primary Examiner
Art Unit 1753